DNBI Update

18th MEDCOM Preventive Services Directorate

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18th MEDCOM Preventive Services Directorate
Bldg 5477, SP
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Smallpox Vaccination: Treating Adverse Events

Smallpox vaccinations have begun for 18th MEDCOM active-duty and select DA civilian healthcare workers.

This article in our series will review the adverse events that can occur after smallpox vaccination and their appropriate treatment.

As of 25 APR 03, 486 active duty healthcare workers on the peninsula have received the vaccine with a 97% take rate. 118 persons were exempted.

No serious adverse events have occurred. Only one person took any time off work. One other person developed a mild, non-specific post-vaccination rash.

Nationwide, over 3,000,000 active-duty troops and healthcare workers have been vaccinated. A few required quarters for less than 48 hrs. Nine cases of accidental inoculation have been reported. The lesions healed without consequence. 3 cases of post-vaccinial encephalitis have been reported; all have recovered. 10 cases of pericarditis have been reported; all have recovered as well. No events requiring vaccinia immunoglobulin (VIG) use have occurred. One Reservist with cardiac risk factors died of a heart attack after receiving the vaccine; it is unclear if the two events are causally related.

Fever After Vaccination

Common side effects include low-grade fever, myalgias and malaise. This is usually seen at 6-8 or at 10-12 days after vaccination.

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Tuberculosis: Still a threat to troops

During the winter months, the prevalence of respiratory complaints can make it easier to overlook alternate diagnoses, particularly tuberculosis.

While the TB rate in Korea is declining, their most recent data indicates that TB is still nearly 17 times higher than in the United States.

Although the BCG vaccine is used in Korea and other countries around the globe, TB testing can still be performed in previously vaccinated people.

Treatment Options

PPD-positive individuals with chest x-ray findings or symptoms suggestive of TB can be started on a four-drug regimen while awaiting culture and sensitivity results. 10 days of treatment have been shown to render patients incapable of transmitting the disease to others. Respiratory precautions should be observed during the initial 10-day treatment, however. The four-drug regimen must be continued until culture results are available.

Otherwise healthy persons whose skin test converts (>10mm of induration—NOT just erythema) while they are in Korea should be started on a nine-month course of INH. Vitamin B_6 is given daily to prevent side effects of INH. If medication compliance appears to be a problem for the person, a two-month course of rifampin and INH with B_6 may be a reasonable option.

Liver function monitoring has become a controversial issue of late. In the past monitoring was often provided at frequent intervals. However,

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Only clean water has saved more lives than vaccines.

Treating Adverse Events

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Lymphadenopathy, localized lymphangitis, and surrounding intense erythema are usual, and typically do not indicate cellulitis. Also local skin irritation due to the dressing adhesive is common, but resolves quickly as dressings are no longer required. Leaving the site to air dry when in quarters and not on duty is appropriate and speeds healing.

Post-Vaccine Rashes

A wide variety of rashes, mostly mild and self-limiting, can occur after smallpox vaccination. Typically the person appears well, and requires only supportive care, such as oral antipuritics.

Erythema multiforme (EM) may also occur after vaccination. It occurs as a result of hypersensitivity to the smallpox vaccine. Mild forms require little intervention, but major forms, particularly Stevens-Johnson syndrome, require hospitalization and supportive care.

The use of systemic steroids to treat EM major is controversial. Specialty consultation must be obtained prior to their use in this circumstance. VIG is not indicated.

Accidental Inoculation

Adherence to site care precautions is adequate to prevent accidental inoculation. In the past, this was the most common complication of smallpox vaccination, most likely because children were vaccinated.

Typically accidental inoculation lesions do not require specific therapy. However, contact precautions must be extended to include the new sites, as vaccinia virus is present in these lesions as well.

Treatment with VIG is indicated only when large areas of skin are involved, or for severe ocular vaccinia infection. Isolated vaccinia keratitis should NOT be treated with VIG, as increased scarring and vision losses can result.

Myo/Pericarditis

Myo- and pericarditis have been seen after smallpox vaccination. This typically manifests as chest pain with diffuse EKG changes. The chest pain is often positional; patients are more comfortable upright or leaning forward and often cannot tolerate lying flat. Patients typically respond well to treatment with NSAIDs.

Generalized Vaccinia

Generalized vaccinia (GV) is typically a self-limited, benign condition in immunocompentent persons, manifested by

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TB *continued from page 1*

recent studies show that healthy younger people generally do not need monitoring. Older people, persons who consume alcohol or Tylenol and people who have sustained liver insults, such as hepatitis, will benefit from monitoring. Generally, initial increases in LFTs of 3 times baseline may be seen, but this should wane, and INH therapy can be continued. Persistent increases or increases >3 times normal will require assessment and either an alternate dose scheduling or termination of INH. The PM Consultant should be contacted when such issues arise (736-3025).

Preventing TB Disease

Active Duty personnel receive the PPD skin test as part of their routine out-processing requirements from the Republic of Korea. The Department of Defense Schools has an annual PPD testing requirement and several occupations also have annual requirements. Family members should also be tested at the time of departure or within 90 days after return to the United States. The tests must be read within 48-72 hrs of placement, and the results must be recorded in all records and logbooks. While every person with a positive (>10mm induration—not erythema alone) skin test MUST be referred to the local Community Health Nurse (CHN) for evaluation and treatment, the service and/or family member will still be able to PCS on schedule. They will, however, need to arrange follow-up with the local CHN upon arrival at the next duty location to ensure treatment continuity. If there are any questions do not hesitate to contact the Preventive Services Directorate at 736-3025. ⌘

Smallpox Vaccine

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disseminated maculopapular or vesicular rash approximately one week after vaccination. The lesions are believed to contain virus and typically progress similarly to the actual vaccination site. Contact precautions must be extended to include all lesions.

Ill-appearing and/or immunocompromised GV patients benefit from VIG. Otherwise, supportive therapy, including NSAIDS and oral antipruritic agents, is appropriate.

Encephalitis

Three cases of encephalitis have been reported in recently vaccinated deploying troops. It is important to remember that post-vaccinial encephalitis (PVE) is a diagnosis of exclusion; other infectious or toxic causes must be ruled out.

The pathophysiology of PVE is not well understood and is likely multifactorial. The phenomenon is likely related to immune-mediated demyelination rather than direct virus effects on the CNS. Consequently, VIG has not been demonstrated to be of use in this condition. Supportive therapy is indicated.

Progressive Vaccinia

Progressive vaccinia (PV) occurs almost exclusively in immunocompromised persons, although persons with humoral deficits often have better outcomes than persons with deficits in cell-mediated immunity.

PV has also been called vaccinia gangrenosa, vaccinia necrosum, prolonged vaccinia, and disseminated vaccinia for the painless progressive necrosis that occurs at the site of inoculation. Metastatic lesions may develop at distant sites due to viremia, making contact isolation necessary for these patients.

Historically PV has been associated with high mortality rates. Early intervention with VIG is key to successful therapy, although individual immune status is also important in recovery. Surgical debridement does not demonstrate any clear benefits.

Eczema Vaccinatum

Eczema vaccinatum (EV) occurs most often in persons with a history of atopic dermatitis (AD), either as a result of vaccination or close contact with a recent vaccinee.

EV is characterized by the development of localized or generalized rash lesions resembling inoculation lesions. The lesions typically occur in areas previously affected by AD. Confluence may occur.

EV patients usually experience systemic symptoms, including fever and malaise. Like burn victims, they require careful skin care and fluid and electrolyte management, particularly when larger areas of skin are involved.

Early treatment with VIG will substantially reduce mortality. Antiviral agents, such as cidofovir, may also be of benefit. ⌘

Additional Resources:

For additional details, including photographs, check out: Smallpox Vaccination and Adverse Events: Guidance for Clinicians, February 21, 2003/Vol 52/No RR-4, available on the CDC website: www.cdc.gov.

Other useful information is available at

http://www.vaccines.army.mil/

http://www.bt.cdc.gov/agent/smallpox/index.asp.

Email your questions to:

smallpox@kor.amedd.army.mil

Severe Acute Respiratory Syndrome

Severe Acute Respiratory Syndrome (SARS) is a disease that has been linked to a novel coronavirus. Due to the prevalence of international travel, the illness has appeared on seven continents. While much work has been done to characterize the causative agent, the role of the virus in the outbreak is unclear. Much remains to be learned about its behavior, infectivity, and more. While PCR and serologic tests have been developed to assess for the virus or exposure to the virus, the relationship between positive and negative tests and the course of illness still poses many unanswered questions. At this time, these tests have no role in SARS diagnosis. This may change in the next weeks or months, however.

Much media attention has been directed to this outbreak. However, travel to an area of documented transmission or close contact to a SARS patient is required to develop this specific disease. While the illness can be severe, the disease to date carries roughly a 4-6% mortality rate. Countries with very small numbers of cases have artificially elevated death rates.

Approximately 10-20% of patients require ventilatory support. SARS still appears to be transmitted primarily to close contacts of patients; the role of environmental or other modes of transmission is still unclear. However, transmission to health care workers has decreased dramatically with the institution of strict isolation and infection control practices.

To date, no specific treatment regimens have been identified. Hong Kong hospitals have used ribavirin and steroids while other locations have used oseltamivir to treat patients.

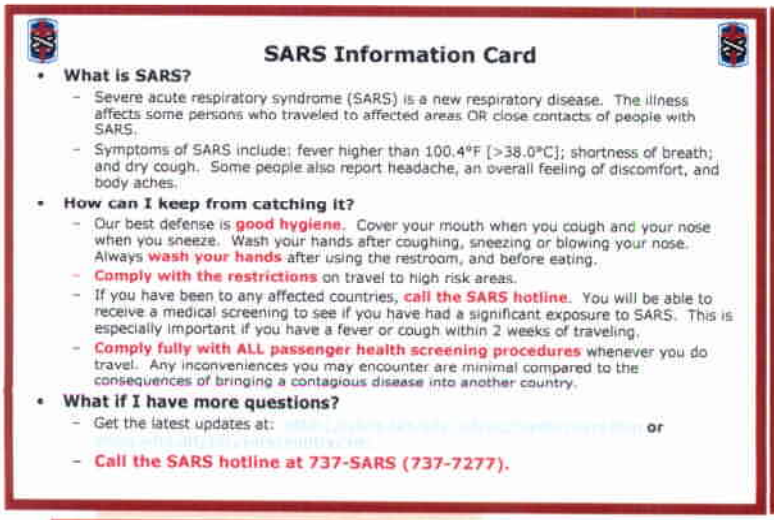
Current WHO guidelines for the management of contacts of suspected or probable cases recommend include reassurance and prompt reporting to a healthcare provider should fever or respiratory symptoms develop. No prophylactic medication regimen has been recommended.

Travel advisories and restrictions are in place, however, in order to prevent introducing this disease to new areas and defeating current work in containing the outbreaks. Air travel by ill persons has been primarily responsible for the rapid spread of the virus. For military personnel abroad, non-essential travel to affected areas poses risks to readiness and mission success, as the appearance of even a single case would result in the isolation and monitoring of substantial numbers of people. ⌘

Additional Resources:

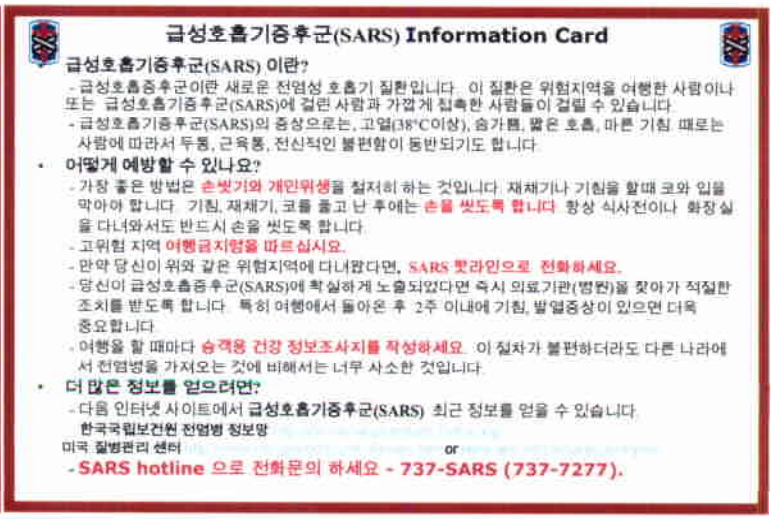
www.cdc.gov

www.who.int/csr/sars/



SARS Information Card

- **What is SARS?**
  - Severe acute respiratory syndrome (SARS) is a new respiratory disease. The illness affects some persons who traveled to affected areas OR close contacts of people with SARS.
  - Symptoms of SARS include: fever higher than 100.4°F [>38.0°C]; shortness of breath; and dry cough. Some people also report headache, an overall feeling of discomfort, and body aches.
- **How can I keep from catching it?**
  - Our best defense is **good hygiene.** Cover your mouth when you cough and your nose when you sneeze. Wash your hands after coughing, sneezing or blowing your nose. Always **wash your hands** after using the restroom, and before eating.
  - **Comply with the restrictions** on travel to high risk areas.
  - If you have been to any affected countries, **call the SARS hotline.** You will be able to receive a medical screening to see if you have had a significant exposure to SARS. This is especially important if you have a fever or cough within 2 weeks of traveling.
  - **Comply fully with ALL passenger health screening procedures** whenever you do travel. Any inconveniences you may encounter are minimal compared to the consequences of bringing a contagious disease into another country.
- **What if I have more questions?**
  - Get the latest updates at: or
  - **Call the SARS hotline at 737-SARS (737-7277).**



급성호흡기증후군(SARS) Information Card

급성호흡기증후군(SARS) 이란?

- 급성호흡증후군이란 새로운 전염성 호흡기 질환입니다. 이 질환은 위험지역을 여행한 사람이나 또는 급성호흡기증후군(SARS)에 걸린 사람과 가깝게 접촉한 사람들이 걸릴 수 있습니다.
- 급성호흡기증후군(SARS)의 증상으로는, 고열(38°C이상), 숨가쁨, 깊은 호흡, 마른 기침 때로는 사람에 따라서 두통, 근육통, 전신적인 불편함이 동반되기도 합니다.

- **어떻게 예방할 수 있나요?**
  - 가장 좋은 방법은 **손씻기와 개인위생**을 철저히 하는 것입니다. 재채기나 기침을 할때 코와 입을 막아야 합니다. 기침, 재채기, 코를 풀고 난 후에는 **손을 씻도록 합니다.** 항상 식사전이나 화장실을 다녀와서도 반드시 손을 씻도록 합니다.
  - 고위험 지역 **여행금지령을 따르십시오.**
  - 만약 당신이 위와 같은 위험지역에 다녀왔다면, **SARS 핫라인으로 전화하세요.**
  - 당신이 급성호흡증후군(SARS)에 확실하게 노출되었다면 즉시 의료기관(병원)을 찾아가 적절한 조치를 받도록 합니다. 특히 여행에서 돌아온 후 2주 이내에 기침, 발열증상이 있으면 더욱 중요합니다.
  - 여행을 할 때마다 **습격용 건강 정보조사지를 작성하세요.** 이 절차가 불편하더라도 다른 나라에서 전염병을 가져오는 것에 비해서는 너무 사소한 것입니다.
- **더 많은 정보를 얻으려면?**
  - 다음 인터넷 사이트에서 **급성호흡기증후군(SARS)** 최근 정보를 얻을 수 있습니다.
    한국국립보건원 전염병 정보망
    미국 질병관리 센터 or
  - **SARS hotline 으로 전화문의 하세요 - 737-SARS (737-7277).**

18th MEDCOM Reportable Events Program

Selected Reportable Events Incidence Summary

JAN-FEB 2003

Reportable Condition	Area I	Area II	Area III	Area IV	Totals
Trichomonas	0	1	0	0	1
Chlamydia	51	40	10	23	124
Herpes simplex	3	2	0	0	5
Gonorrhea	13	9	3	4	29
Syphillis	0	0	0	0	0
HIV	0	0	0	0	0
STD Totals	67	52	13	27	159
Tuberculosis (active disease)	0	1	0	0	0
Tuberculosis (recent converter)	7	43	5	5	60
Heat Injury	0	0	0	0	0
Cold Injury	7	0	1	0	8

NR=None Reported

Conditions		JAN-FEB 2003	Cum 2003	Cum 2002
STD	Chlamydia	124	124	466
	Gonorrhea	29	29	122
	Herpes Type II	5	5	4
	HIV/AIDS	1	1	4
	Trichomonas	1	1	13
	Syphilis	0	0	5
Infectious Diseases	Campylobacter	0	0	3
	Cholera	0	0	0
	E.Coli 0157:H7	0	0	0
	Encephalitis	0	0	0
	Giardiasis	0	0	0
	Hepatitis A	1	1	1
	Hepatitis B	1	1	5
	Hepatitis C	0	0	0
	Influenza	0	0	0
	Measles	0	0	1
	Meningoccal Meningitis	0	0	0
	Pneumococcal Pneumonia	0	0	0
	TB, Active	0	0	6
	PPD Conversion	60	60	353
	Salmonellosis	0	0	9
	Shigellosis	0	0	0
	Typhoid Fever	0	0	0
	Varicella, adult	0	0	2
Vector-borne Diseases	Dengue Fever	0	0	0
	Ehrlichiosis	0	0	0
	HFRS	0	0	0
	Japanese Encephalitis	0	0	0
	Leptospirosis	0	0	0
	Malaria+	1℗	1℗	19* ROK; 23 US
	Rabies	0	0	0
	Scrub Typhus	0	0	0
Injuries	Animal Bites	37 (includes 3/03)	37	12
	Cold Injury	8	8	18
	Heat Injury	0	0	14
	CO Poisoning	0	0	0
	Lead poisoning	0	0	0
	Hearing Loss	0	0	0
Immunization	VAERS	2	2	0
	Influenza	0	0	0

Notes:
**One case represents disease contracted outside the ROK; ℗ relapse in SM not treated with primaquin last year*
+*ROK refers to cases diagnosed in Korea; US refers to those which developed after the soldier returned to the United States*
Please refer to the reverse of the 18th MEDCOM IHO Reportable Events Worksheet for a complete listing of reportable events. This form is available at https://www.seoul.amedd.army.mil/Pm/Forms/Reportdisform18medFeb02.pdf.

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Views and opinions expressed are not necessarily those of the 18th MEDCOM or the Department of the Army

We're on the Web!

See us on the 18th MEDCOM Homepage!

Upcoming Events

Tobacco Cessation

AREA I

CRC start dates: April 8, May 6, & Jun 3
Casey start dates: April 10, May 7, & Jun 4

AREA II

Yongsan: Apr 3, 7, 10, & 17

AREA IV

Camp Carroll: Every Mon at 1300 in ACS Blg

Camp Walker: Every Wed at 1400 at TMC

Camp Hialeah: Feb 20 at 1300 at TMC

Four-week program starts the first Thursday of every month (*except December due to holidays). To register, call 736-3029.

18th MEDCOM Health Fair

31 May

Volunteers are needed to make this fair a fun-filled successful event! Call 736-3029 for more information.

Field Sanitation Team Training

7-11 April

19-23 May

9-13 June

702nd MSB, Cp Casey

Reserve slots for your unit now!!. To register, call DSN 730-2078.

14-18 April
16-20 June

4-8 August
5th PM Detachment, Yongsan
Reserve slots for your unit now!!. For more information call DSN 725-4929.

Food Handlers Course

27 March
30 April
15 May
26 June
17 July

Learn proper food handling techniques. Hangul classes are 0800-1200; English classes are 1300-1700. To register, call DSN 730-2078.

Medical Effects of Ionizing Radiation Course

28-29 August
121 GH, 2nd fl classroom
0800-1700

Military medical health care providers and operational planners are the target audience for this course. CEU/CME credits will be awarded to Nurses and Physicians. POC is MSG Wan Y. Kim at 736-3023.

Radiation Protection Officer (RPO) Training

3-4 September
121 GH, 2fl classroom
0800-1700

This course is designed for individuals who have been assigned additional duty as either primary or alternate RPO in Health Care Facilities. POC is LTC Pipkin at 736-3039.

About Our Organization...

The mission of the 18th MEDCOM Preventive Services Directorate is to: Maintain oversight of a comprehensive Preventive Medicine Program; promote and maintain the fighting force at maximum effective strength; maintain the physical well being of all personnel; and finally, to establish practical measures for the preservation and promotion of health and the prevention of disease and injury. ⌘